UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/629,262 | 07/31/2000 | David J. Miller | 10001634-1 | 4178 |

| 22879 | 7590 | 03/08/2004 | EXAMINER |
|---|---|---|---|

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| ART UNIT | PAPER NUMBER |
|---|---|
| 3625 | |

DATE MAILED: 03/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>23 December 2003</u>.

2a)☐ This action is **FINAL**.         2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
  closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,2,4-7,9-12,14-17,19 and 20* is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-7,9-12,14-17,19 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 July 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☐ All  b)☐ Some * c)☐ None of:

  1.☐ Certified copies of the priority documents have been received.

  2.☐ Certified copies of the priority documents have been received in Application No. _____.

  3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
    application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
  Paper No(s)/Mail Date _____.

4)☒ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. *11* .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

# DETAILED ACTION

## *Response to Request for Continued Examination*

The Examiner is in receipt of Applicant's response to Office action mailed

6/25/2003, which was received 12/23/2003. Acknowledgement is made to Applicant's

amendment to claims 1 and 11. Applicants amendment has been carefully considered

but was not persuasive in light of the rejection submitted below:

## Examiner's Note

Examiner has cited particular columns and line numbers or figures in the

references as applied to the claims below for the convenience of the applicant.

Although the specified citations are representative of the teachings in the art and are

applied to the specific limitations within the individual claim, other passages and figures

may apply as well. It is respectfully requested from the applicant, in preparing the

responses, to fully consider the references in entirety as potentially teaching all or part

of the claimed invention, as well as the context of the passage as taught by the prior art

or disclosed by the examiner.

## *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

**Claims 1,2,4-7,9-12, 14-17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lazarus et al (6,430,539) in view of Applicant's disclosure and Official Notice.**

**In regards to claim 1**, Lazarus discloses a method of displaying information about a multitude of different customers comprising:

for each customer, receiving a set of numeric values (col 6, lines 43-45),

Lazarus teaches receiving purchasing data from customers, but does not specifically mention that this data includes a recency indicator, and an advocacy indicator for each customer. The applicant has stated that the use of recency, monetary and advocacy characteristics in marketing analysis is old and well known in the art (specification, page 2 lines 1-5). It would be obvious to a person of ordinary skill in the art at the time of the invention to include in Lazarus the use of recency, monetary and advocacy characteristics as taught by the disclosure, because these indicators are readily available from most profiles and are useful in predicting behavior (see also col 30, recency, monetary and frequency).

decaying the numeric value associated with the recency indicator over time according to an absence of activity by each customer (col 3, lines 55-67);

increasing the numeric value associated with the recency indicator over time according to recent activity by each customer (see above, since past data is decayed the more recent data will cary a larger weight/number and col 32, lines 49-55)

for each customer, generating a symbol (FIG 1b and 1b, C1 and C2);

arranging the symbols spatially in a galaxy layout according to a polar coordinate

system based on the numeric values (FIG 1a);

displaying the galaxy layout on a display device to distinguish trends and

patterns in customer behavior (FIG 1a and 1b and summary); and

selecting customers to be part of a marketing campaign based upon a region of

space in the galaxy layout containing visual clusters, patterns and movement

corresponding to the trends and patterns in customer behavior. Lazarus teaches

selecting a targeted group for promotional offers based on segment analysis (col 37,

lines 40-45), Lazarus also teaches a galaxy layout according to a polar coordinate

system (FIG 1). Lazarus uses clustering techniques to place the information into a

vector (col 3, lines 10-54). Lazarus depicts vectors in a 3-dimensional "galaxy"

representation instead of clusters for clearer representation of the data to distinguish

trends and patterns in customer behavior (FIG 1). Lazarus however does not

specifically mention that the vector data is presented in raw form. It would have been

obvious to a person of ordinary skill in the art to remove the vectoring techniques to

present the data in clusters, since it has been held that omission of an element and its

function in a combination where the remaining elements perform the same function as

before involves only routine skill in the art, In re Karlson, 136 USPQ 184.


**In regards to claim 2**, Lazarus teaches generating the numeric values based on

an internet communication activity of the consumer (FIG 2, (105)).

**In regards to claim 4**, Lazarus teaches including converting initial data based on the communication activity to a limited data set of the numeric values (col 4, lines 10-30, summary statistics).

**In regards to claim 5**, Lazarus teaches including receiving additional data based on further communication activity, and modifying the numeric values based on the additional data (col 3, lines 60-65).

**In regards to claim 6**, Lazarus teaches wherein each symbol includes a characteristic indicating a numeric value of a selected parameter (col 18, lines 55-65).

**In regards to claim 7**, Lazarus teaches predictive modeling, but does not specifically mention all the characteristics selected from a group comprising motion, color, size, shape, length, direction, and intensity. It was old and well known in the art at the time of the invention that information may be displayed in numerous different manners including ones that signifying characteristics such as motion, color, size, shape, length, direction, intensity. It would have be obvious to a person of ordinary skill in the art to graphically display the predictive modeling of Lazarus using motion, color, size, shape, length, direction, intensity, because this would improve the visualization of the data in a manner that a human operator could more easily understand and allow for better distribution of incentives.

**In regards to claim 9**, Lazarus teaches wherein arranging the symbols includes generating a representation of a three-dimensional array (see response to claim 1).

**In regards to claim 10**, Lazarus teaches including the step of selecting a subgroup of customers based on a spatial region in which their corresponding symbols reside (col 9, lines 20-30).

**In regards to claim 11**, Lazarus discloses a computer readable memory operable to display information about a multitude of different customers comprising:

a first set of instructions to receive, for each customer, a set of numeric values, each associated with parameters including a recency indicator, and an advocacy indicator;

a second set of instructions to generate, for each customer, a symbol;

a third set of instructions to decay the numeric value associated with the recency indicator over time according to an absence of activity by each customer;

a fourth set of instruction to increase the numeric value associated with the recency indicator over time according to recent activity by each customer

a fifth set of instructions to arrange spatially in a galaxy layout according to a polar coordinate system based on the numeric values;

a sixth set of instruction to display the galaxy layout on a display device to distinguish trends and patterns in customer behavior; and

a seventh set of instructions to select customers to be part of a marketing

campaign based upon a region of space in the galaxy layout containing visual clusters,

patterns and movement corresponding to the trends and patterns in customer behavior

(See response to claim 1).

**In regards to claim 12**, Lazarus teaches including a sixth set of instructions to

generate the numeric values based on an Internet communication activity of the

customer.

**In regards to claim 14**, Lazarus teaches including a seventh set of instructions

to convert initial data based on the communication activity to a limited data set of the

numeric values (see response to claim 4).

**In regards to claim 15**, Lazarus teaches including a eighth set of instructions to

receive additional data based on further communication activity, and to modify the

numeric values based on the additional data (see response to claim 5).


**In regards to claim 16**, Lazarus teaches wherein each symbol includes a

characteristic indicating a numeric value of a selected parameter (see response to claim

6).


**In regards to claim 17**, Lazarus teaches wherein the characteristic is selected

from a group comprising motion, color, size, shape, length, direction, intensity (see

response to claim 7).

**In regards to claim 19,** Lazarus teaches wherein the fifth set of instructions further serves to generate a representation of a three-dimensional array (see response to claim 9).

**In regards to claim 20,** Lazarus teaches including the step of selecting a subgroup of customers based on a spatial region in which their corresponding symbols reside (see respoinse to claim 10).

### *Response to Arguments*

Applicant provided no arguments for consideration.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Mark Fadok** whose telephone number is **(703) 605-4252**. The examiner can normally be reached Monday thru Thursday 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Vincent Millin** can be reached on **(703) 308-1065**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Receptionist** whose telephone number is **(703) 308-1113**.

Any response to this action should be mailed to:

## *Commissioner for Patents*

## *P.O. Box 1450*

## **Alexandria, Va. 22313-1450**

or faxed to:

       **(703) 872-9306**    [Official communications; including

                         After Final communications labeled

                         "Box AF"]

       **(703) 746-7206** [Informal/Draft communications, labeled

                         "PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to Crystal Park 5, 2451 Crystal

Drive, Arlington, VA, 7th floor receptionist.

Mark Fadok

Patent Examiner